

## §210.27

the following calibration procedures shall be used:

(1)(i) The sound level measurement system including the microphone shall be calibrated and appropriately adjusted at one or more nominal frequencies in the range from 250 through 1000 Hz at the beginning of each series of measurements, at intervals not exceeding 1 (one) hour during continual use, and immediately following a measurement indicating a violation.

(ii) The sound level measurement system shall be checked not less than once each year by its manufacturer, a representative of its manufacturer, or a person of equivalent special competence to verify that its accuracy meets the manufacturer's design criteria.

(2) An acoustical calibrator of the microphone coupler type designed for the sound level measurement system in use shall be used to calibrate the sound level measurement system in accordance with paragraph (b)(1)(i) of this section. The calibration must meet or exceed the accuracy requirements specified in section 5.4.1 of the American National Standard Institute Standards, "Method for Measurement of Sound Pressure Levels," (ANSI S1.13-1971) for field method measurements.

(c) Acoustical environment, weather conditions, and background noise requirements are prescribed in §201.23 of the Standards. In addition, a measurement tolerance of 2 dB(A) for a given measurement will be allowed to take into account the effects of the factors listed below and the interpretations of these effects by enforcement personnel:

(1) The common practice of reporting field sound level measurements to the nearest whole decibel;

(2) Variations resulting from commercial instrument tolerances;

(3) Variations resulting from the topography of the noise measurement site;

(4) Variations resulting from atmospheric conditions such as wind, ambient temperature, and atmospheric pressure; and

(5) Variations resulting from reflected sound from small objects allowed within the test site.

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### §210.27 New locomotive certification.

(a) A railroad shall not operate a locomotive built after December 31, 1979, unless the locomotive has been certified to be in compliance with the Standards.

(b) The certification prescribed in this section shall be determined for each locomotive model, by either—

(1) Load cell testing in accordance with the criteria prescribed in the Standards; or

(2) Passby testing in accordance with the criteria prescribed in the Standards.

(c) If passby testing is used under paragraph (b)(2) of this section, it shall be conducted with the locomotive operating at maximum rated horsepower output.

(d) Each new locomotive certified under this section shall be identified by a permanent badge or tag attached in the cab of the locomotive near the location of the inspection Form F 6180.49. The badge or tag shall state:

(1) Whether a load cell or passby test was used;

(2) The date and location of the test; and

(3) The A-weighted sound level reading in decibels obtained during the passby test, or the readings obtained at idle throttle setting and maximum throttle setting during a load cell test.

### §210.29 Operation standards (moving locomotives and rail cars).

The operation standards for the noise emission levels of moving locomotives, rail cars, or consists of locomotives and rail cars are prescribed in the Standards and duplicated in appendix A of this part.

(a) Measurements for compliance shall be made in compliance with the provisions of subpart C of the Standards and the following:

(1) Consists of locomotives containing at least one locomotive unit manufactured prior to December 31, 1979, shall be evaluated for compliance in accordance with §201.12(a) of the Standards, unless a locomotive within the consist is separated by at least 10 rail car lengths or 500 feet from other locomotives in the consist, in which case such separated locomotives may